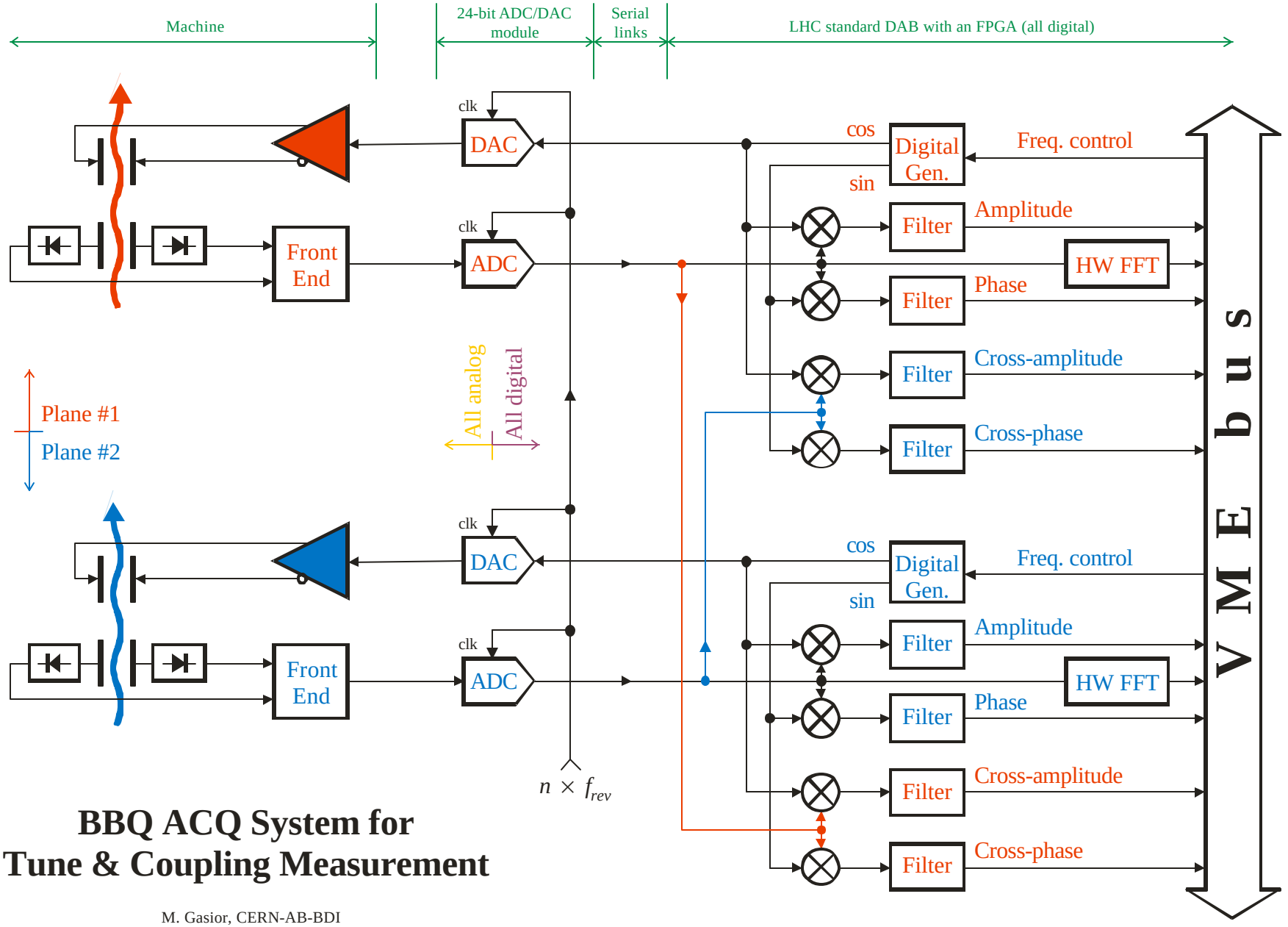
Acquisition System

of the Base-Band Q (BBQ) Measurement

Marek GASIOR, CERN-AB-BDI

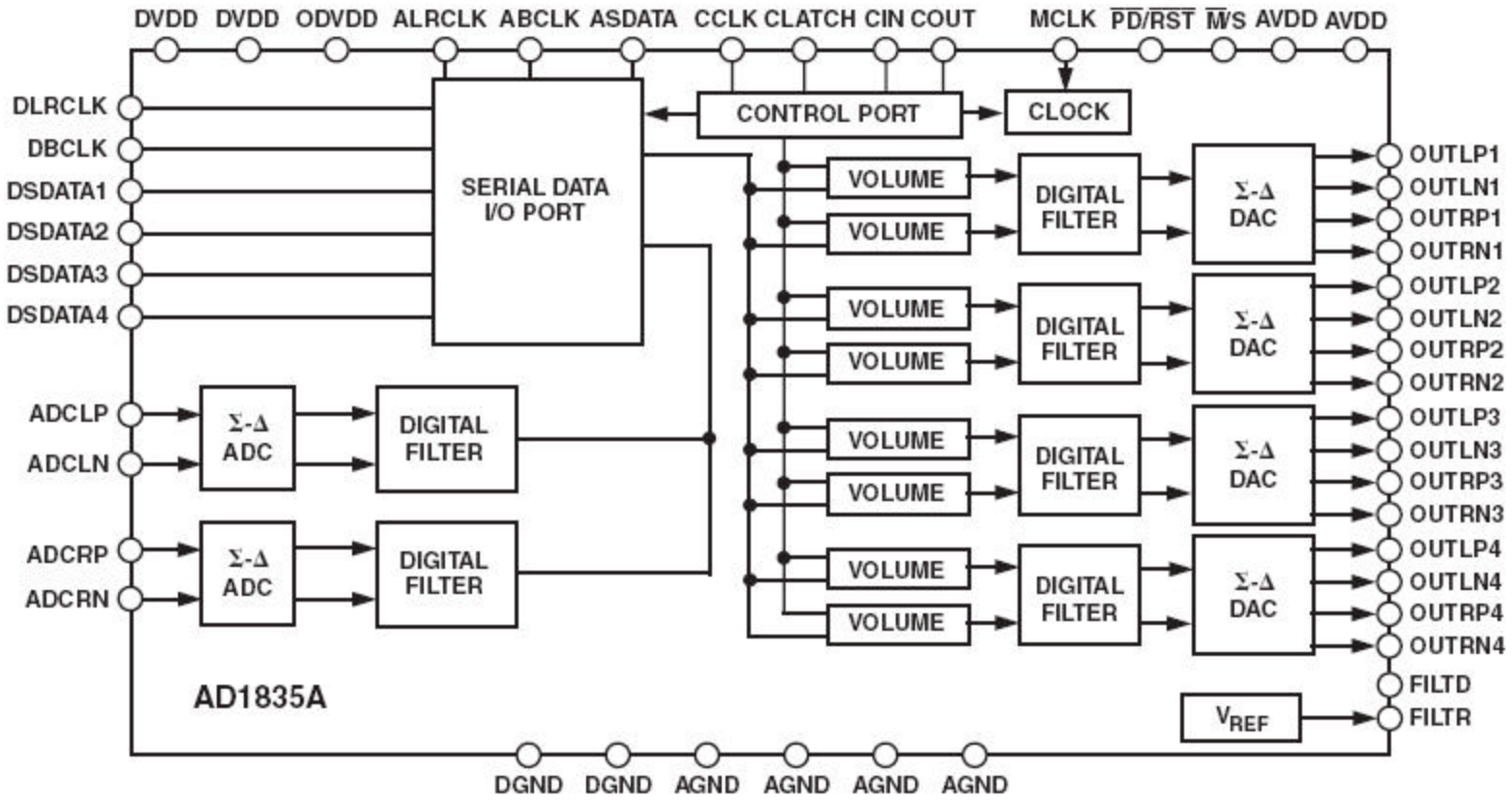
Acquisition Architecture



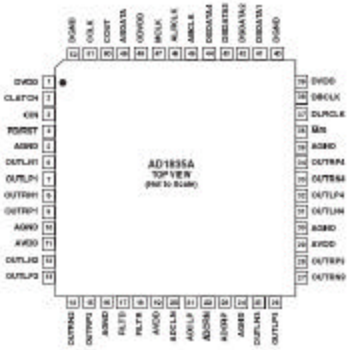
BBQ ACQ System for Tune & Coupling Measurement

M. Gasior, CERN-AB-BDI

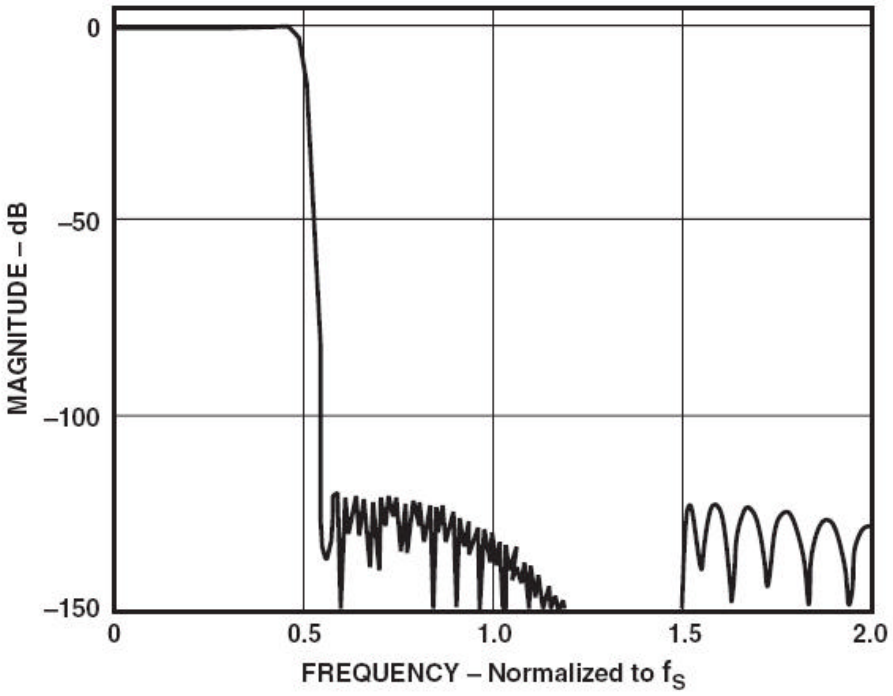
Audio Codec



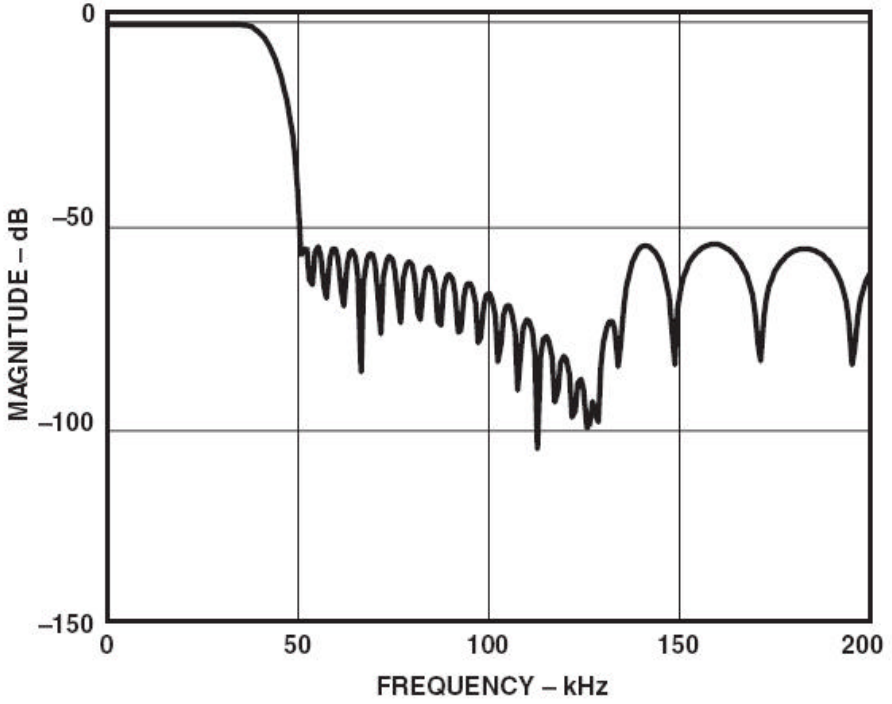
- In one chip 2 ADCs / 8 DACs, 24 bit, 96 kS/s
- SNR 105 dB (i.e. some 18 true bits)
- It can work with any sampling frequency (< 96 kS/s)
- Everything controlled through a single bus (a few serial links)
- Some digital filters already inside



Audio Codec

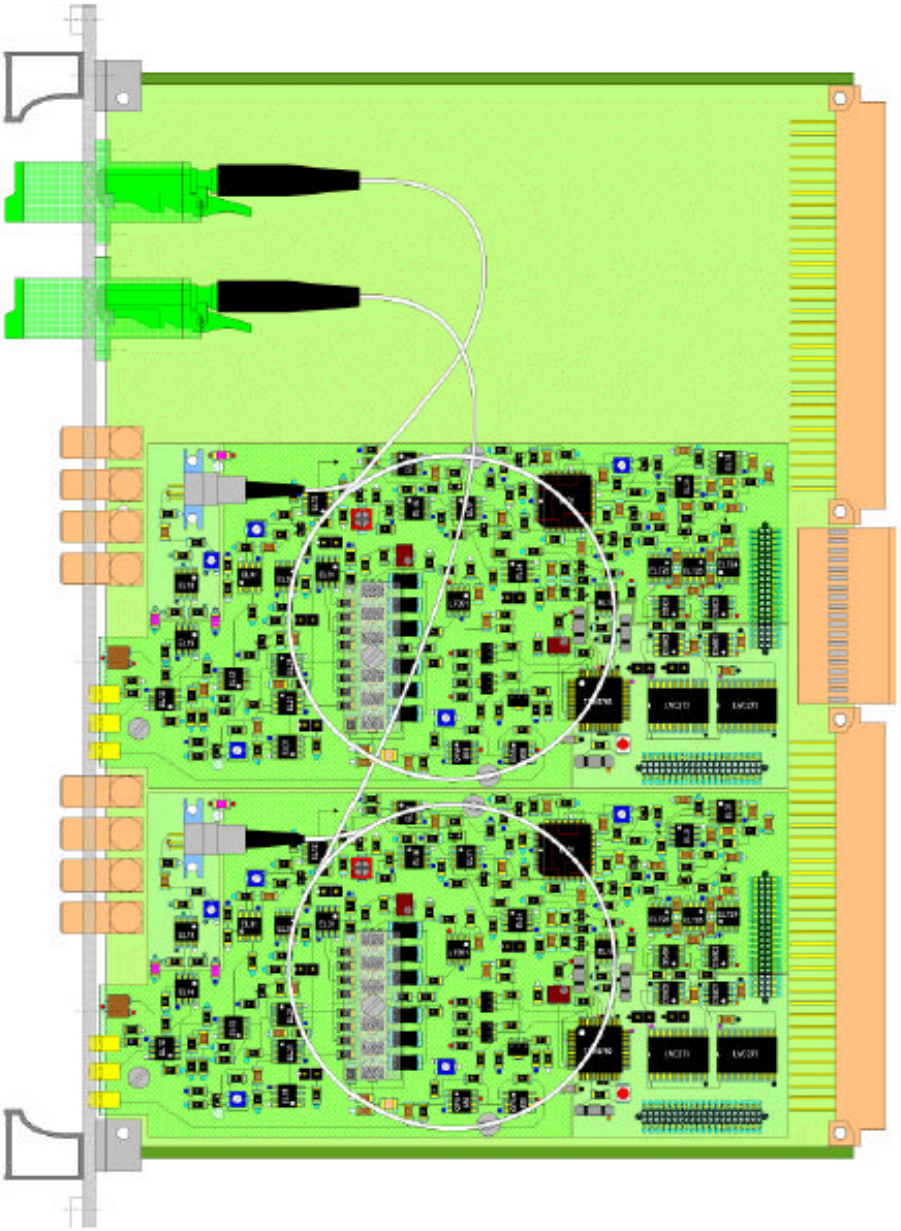


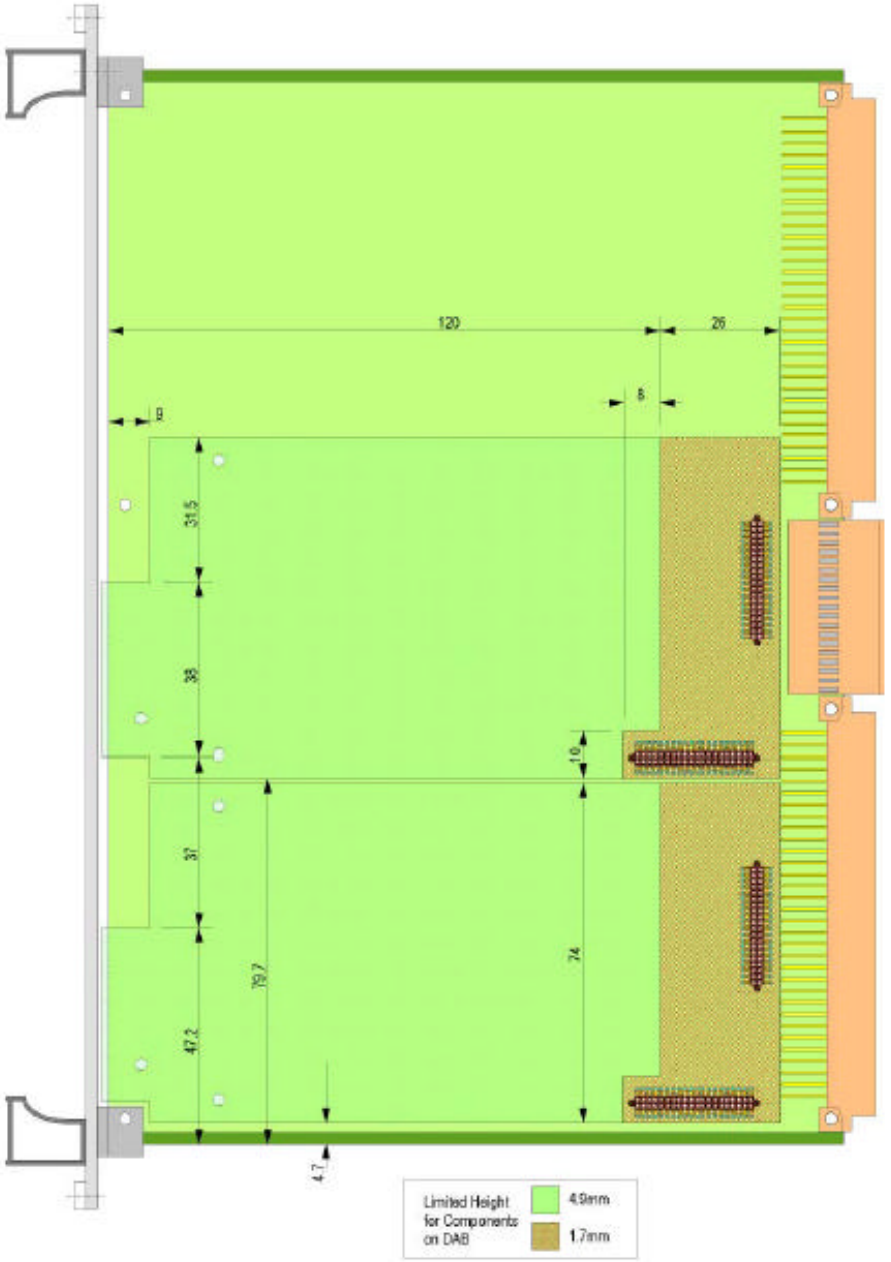
DAC interpolation filter group delay 340 µs



ADC decimation filter group delay 460 µs
with sampling at 96 kHz

DAB




120
26
6
9
31.5
38
10
37
74
19.7
47.2
4.7
Limited Height for Components on DAB
4.9mm
1.7mm